



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,498	12/21/2001	Ulrich Peuchert	SGW-115	4480

23599 7590 04/18/2003

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
2200 CLARENDON BLVD.  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER

BOLDEN, ELIZABETH A

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Offic Action Summary</b>	Application No.	Applicant(s)
	10/024,498	PEUCHERT, ULRICH
	Examiner Elizabeth A. Bolden	Art Unit 1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 06 February 2003.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-48 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 38 and 39 is/are allowed.

6) Claim(s) 1-37, 40-43, and 46-48 is/are rejected.

7) Claim(s) 36, 37, 41-44, 47 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

Any rejections and or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

***Additional Fees***

An amount of \$336.00 was charged to Deposit Account No. 13-3402. This addition fee was charged for 4 independent claims; there are 16 independent claims wherein only total of 12 independent claims had been paid for.

***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 22 December 2000. It is noted, however, that applicant has not filed a certified copy of the 10064804.5 application as required by 35 U.S.C. 119(b).

***Claim Objections***

Claims 40, 41, 42, and 43 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 6, 16, 20, and 30, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. On page 11, of the Amendment filed 6 February

2003, it states that “New claims 38-45 correspond to already present claims 1, 2, 6, 16, 20, 30, 36, and 37, respectively; however, use the “consisting of” claim language terminology. However, claims 40-43 are exact duplicates of claims 6, 16, 20, and 30 and use the “consisting essentially of” language.

Claims 36, 37, 44, and 45 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 1, 2, 38, and 39, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. “When the specification provides a definition for terms in the claims... the specification can be used in interpreting claim language.” See MPEP 2111.01. “Alkali-free” is defined by the specification as meaning that the glass is “essentially free of alkali metal oxides” but may contain “less than 1500ppm” alkali metal oxides. See page 8, second paragraph. In view of this definition, Claims 36, 37, 44, and 45 are substantial duplicates of claims 1, 2, 38, and 39.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-37, 40-43, and 48 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Peuchert et al., U.S. 6,417,124.

Peuchert et al. disclose an alkali-free aluminoborosilicate comprising 50-70 wt% SiO<sub>2</sub>, 0.5-15 wt% B<sub>2</sub>O<sub>3</sub>, 10-25 Al<sub>2</sub>O<sub>3</sub>, 0-10 wt% MgO, 0-10 wt% CaO, 0-12 wt% SrO, 0-15 wt% BaO, 0-10 wt% ZnO, 0-5 wt% ZrO<sub>2</sub>, 0-5 wt% TiO<sub>2</sub>, 0-2 SnO<sub>2</sub>, and 0.05-2 MoO<sub>3</sub> and other components. See abstract of Peuchert et al. and column 5, lines 50-55 and 65-67. These compositional ranges and density are sufficiently specific to anticipate all the compositional and density limitations of claims 1-37, 40-43, and 48. See MPEP 2131.03.

As to instant claims 32-35, the reference discloses that the glass can be used as a substrate for thin film transistors, active matrix liquid crystal displays, and plasma addressed liquid crystals. See column 1, lines 6-11. Furthermore, Examples A3 and A4 meet all the limitations of claims 1-37, 40-43 and 48.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-37, 40-43, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narita et al., U.S. Patent 6,468,933.

Narita et al. teach an alkali-free glass consisting of 40-70 wt% SiO<sub>2</sub>, 5-20 wt% B<sub>2</sub>O<sub>3</sub>, 6-25 Al<sub>2</sub>O<sub>3</sub>, 0-10 wt% MgO, 0-15 wt% CaO, 0-10 wt% SrO, 0-30 wt% BaO, 0-10 wt% ZnO, 0.05-2 wt% SnO<sub>2</sub>, and 0.005-1 wt% Cl<sub>2</sub>. See abstract of Narita et al. Narita et al. teach that glass can be as a substrate for display technologies. See column 1, lines 7-10.

Narita et al. differ from the instant claims by not teaching specific examples that lie within the compositional ranges nor ranges of glass components which are sufficiently specific to anticipate the claim limitations. However, the compositional ranges of Narita et al. overlap the compositional ranges of claims 1-37 and 40-43. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges of Narita et al. because overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

One of ordinary skill in the art would expect that a glass with overlapping compositional ranges would have the same density as recited in claim 48.

Claims 1-37, 40-43, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watzke, German Patent, DE 196 01 922 A1.

An English translation of DE 196 01 922 A1 accompanies this action. In reciting this rejection, the examiner will cite this translation.

Watzke teaches an alkaline earth aluminoborosilicate glass consisting of 50-65 wt% SiO<sub>2</sub>, 5-15 wt% B<sub>2</sub>O<sub>3</sub>, 10-20 Al<sub>2</sub>O<sub>3</sub>, 0-10 wt% MgO, 0-20 wt% CaO, 0-20 wt% SrO, 0-20 wt% BaO,

0-10 wt% ZnO, 0.01-1 wt% SnO, 0.1-2 wt% ZrO<sub>2</sub>, 0-10 La<sub>2</sub>O<sub>3</sub>, 0-10 wt% Nb<sub>2</sub>O<sub>5</sub>, 0-10 wt% Ta<sub>2</sub>O<sub>5</sub> and 0-10 wt% TiO<sub>2</sub> and other minor components. See the Derwent Abstract of Watzke and page 9, lines 6-11. More specifically, Watzke teaches the compositional ranges are 53-63 wt% SiO<sub>2</sub>, 5-15 wt% B<sub>2</sub>O<sub>3</sub>, 12-20 Al<sub>2</sub>O<sub>3</sub>, 0-5 wt% MgO, 2-10 wt% CaO, 0-10 wt% SrO, 3-15 wt% BaO, 0.01-1 wt% SnO, and 0.1-1 wt% ZrO<sub>2</sub>. See page 9, lines 16-18. Watzke teaches that glass can be as a substrate for display technologies or as thin layer solar cells. See page 2, lines 14-19. Watzke teaches that the alkali free flat glasses would have a density less than or equal to 2.6 g/cm<sup>3</sup>. See page 6, line 8.

Watzke differs from the instant claims by not teaching specific examples that lie within the compositional ranges nor ranges of glass components which are sufficiently specific to anticipate the claim limitations. However, the compositional ranges of Watzke overlap the compositional ranges of claims 1-37, 40-43, and 46-48. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges of Watzke because overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Claims 1-37, 40-43, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lautenschläger et al., U.S. Patent 6,465,381.

Lautenschläger et al. teach an alkali-free glass consisting of >60-65 wt% SiO<sub>2</sub>, 6.5-9.5 wt% B<sub>2</sub>O<sub>3</sub>, 14-21 Al<sub>2</sub>O<sub>3</sub>, 1-8 wt% MgO, 1-6 wt% CaO, 1-9 wt% SrO, 0.1-3.5 wt% BaO, 0.1-1.5

Art Unit: 1755

wt% ZrO<sub>2</sub>, 0.1-1 wt% SnO<sub>2</sub>, 0.1-1 TiO<sub>2</sub> and 0.001-1 wt% CeO<sub>2</sub>. See abstract of Lautenschläger et al. Lautenschläger et al. teach that glass can be as a substrate for display technologies. See Abstract of Lautenschläger et al. Lautenschläger et al. teach that the glass has a density of less than 2.5 g/cm<sup>3</sup>. See column 11, line 55. The reference also teaches the use of refining agents such as As<sub>2</sub>O<sub>3</sub>, Sb<sub>2</sub>O<sub>3</sub>, Cl<sup>-</sup>, F<sup>-</sup>, and SO<sub>4</sub><sup>2-</sup>. See column 7, lines 33-41.

Lautenschläger et al. differ from the instant claims by not teaching specific examples that lie within the compositional ranges nor ranges of glass components which are sufficiently specific to anticipate the claim limitations. However, the compositional ranges of Lautenschläger et al. overlap the compositional ranges of claims 1-37, 40-43, and 46-48. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges of Lautenschläger et al. because overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

### ***Response to Arguments***

Applicant's arguments filed 6 February 2003 have been fully considered but they are not persuasive.

Applicant argues that Peuchert et al., US 6,417,124 does not anticipate Claims 1-37 since MoO<sub>3</sub> is a required element and claims 1-37 use "consisting essentially of" language.

MPEP 2111.03 states:

The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect

the basic and novel characteristic(s)" of the claimed invention.... For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." ... If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. MPEP2111.03

In view of MPEP 2111.03, Applicant's argument is deemed not persuasive. There is nothing of record to suggest that the addition of  $\text{MoO}_3$  to the present invention would materially affect the novel or basic characteristics of the present invention. Accordingly the "consisting essentially of" claim language does not exclude  $\text{MoO}_3$  from the claims.

Applicant argues that the glasses of the instant invention are not obvious over Narita et al., U.S. Patent 6,468,933 since the reference does not teach any specific examples of the composition nor the specific ratio and content of  $\text{MgO}$ ,  $\text{CaO}$ ,  $\text{BaO}$ , and  $\text{SrO}$ .

This is not deemed persuasive since Narita et al. do teach compositional ranges that overlap the compositional ranges of claims 1-37, 40 and 42. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Applicant further argues that Narita et al. teaches away from the claims 46 and 47 where the instant invention's compositions contain  $\text{Sb}_2\text{O}_3$ . This is deemed persuasive and there is no rejection for claims 46 and 47 over Narita et al.

Applicant's argue that the instant invention is not obvious over Watzke, DE 196 01 922 A1 and Lautenschläger et al., US 6,465,381 since the references do not teach any specific examples of the composition nor the specific ratio and content of  $\text{MgO}$ ,  $\text{CaO}$ ,  $\text{BaO}$ , and  $\text{SrO}$ .

This is not deemed persuasive since Watzke and Lautenschläger et al. do teach compositional ranges that overlap the compositional ranges of claims 1-37, 40, 42, and 46-48. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

***Allowable Subject Matter***

Claims 38 and 39 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art fails to disclose or suggest an alkali-free aluminoborosilicate glass consisting of by weight percent SiO<sub>2</sub>, B<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, CaO, SrO, and BaO as recited in claims 38 and 39 in the claimed amounts.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is 703-305-0124. The examiner can normally be reached on 8:30am to 6:00 pm with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 703-308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EAB



DAVID SAMPLE  
PRIMARY EXAMINER

April 14, 2003